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NPIC/R-132/63
July 1963

PHOTOGRAPHIC INTERPRETATION REPORT

PRELIMINARY STUDY
SA-2 SAM SUPPORT FACILITIES,
USSR & SATELLITES



CIA



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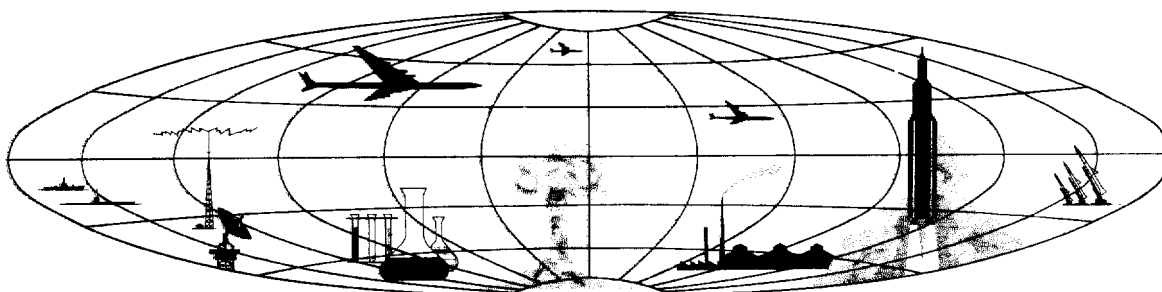
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PHOTOGRAPHIC INTERPRETATION REPORT

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INTRODUCTION

A preliminary study of SA-2 support facilities in the USSR and certain European satellite countries was undertaken in order to determine the types and deployment of these installations (Figure 1). Because of the immediate need for additional intelligence regarding SA-2 support facilities, only a cursory interpretation has been accomplished, and the findings stated herein should be considered tentative.

The SA-2 support facilities identified to date are believed to fall into two general types: rectangular and square. For the purpose of this report, they will be referred to as Types

I and II, respectively. Of the 128 facilities considered, 76 are classified as Type I and 52 as Type II, as shown in Table 1.

Type I was first observed deployed in [REDACTED] while the Type II facility was not observed until the [REDACTED]. There have been no Type I facilities observed under construction in the USSR since the first Type II deployment, while the latter has been observed under construction as recently as the [REDACTED]. It is, therefore, logical to assume that the Type I has been phased out in favor of the Type II facility.

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TYPE I SUPPORT FACILITIES

Type I facilities (Figures 2 and 3) are generally enclosed by a rectangular fence line and have a similar basic internal road network. The road network consists of two main interconnecting roads, which in most cases are parallel to the long axis of the facility.

The servicing of the missiles (assembly, checkout and fueling) probably is performed in the various structures situated on or along one of the main roads, while the component storage areas are served by the second road.

The largest building in the facility (200 by 70 feet) is designated as the receiving/maintenance building and has a drive-through capability. It is positioned on the service road with its long axis perpendicular to the road.

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[REDACTED]

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A smaller drive-through building (55 by 30 feet) is located on the service road near the receiving/maintenance building.

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Located on a turnoff midway along the service road is an open shed 40 by 30 feet.

[REDACTED]

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The final structure on the service road is a drive-through building 60 by 25 feet which is designated as the assembly building.

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The assembly operations observed included the attachment of the stabilizer fins to the missile and the

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probable mating of the booster and sustainer. In addition, a partially attached nosecone was observed on one missile

of the receiving/maintenance building.

At some of the facilities where photo quality permits, a probable buried tank has been observed within the loop of the service road. At other facilities, a drainage ditch has been observed extending from the loop to a sump located beyond the fence line of the facility.

Observation of the support facilities in Cuba bears out the assumption that the assembly functions are performed in either an open area or in a building other than the receiving/maintenance building.

One significant feature found only at the Type I facilities is that after the service road passes through the assembly building, it doubles back on itself to form a loop.

The second main road serves three revetted storage buildings (85 by 30, 35 by 30, and 20 by 15 feet) which house the various components of the missile. It can be assumed that a supply

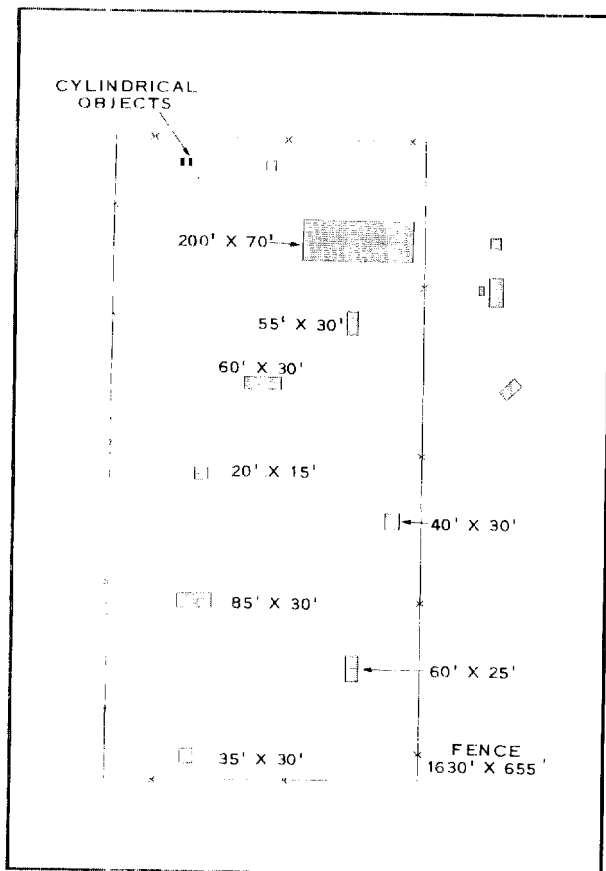


FIGURE 2 VOLGOGRAD SAM SUPPORT FACILITY (TYPE I).

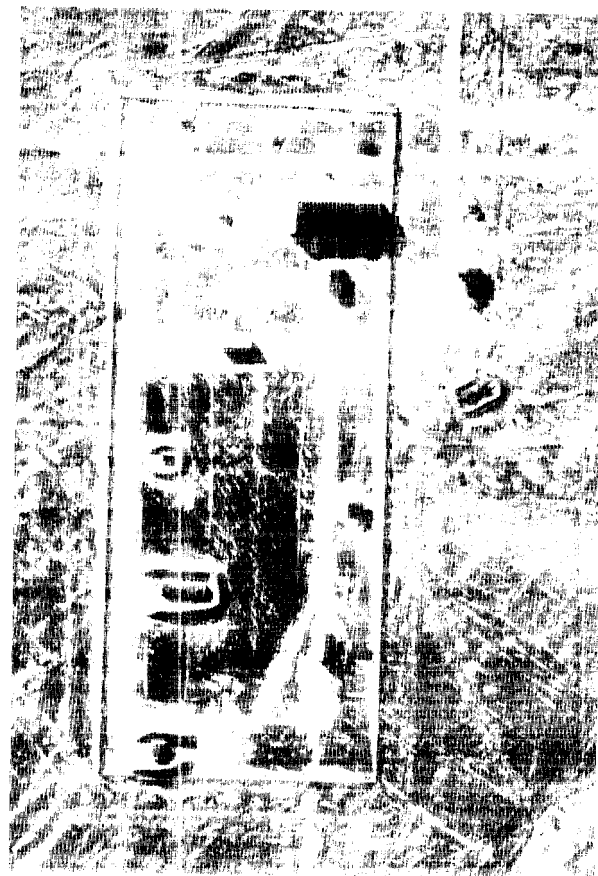


FIGURE 3 VOLGOGRAD SAM SUPPORT FACILITY

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of all components is maintained at the facility; and the substainer unit, being the largest component, is probably stored in the largest of the three buildings. The other two would then be used to house other components such as warheads, boosters, and fuzes.

There are two additional features which are requisite to the Type I facility. The larger of these is a probable vehicle shed which is positioned along one of the interconnecting roads between the service and storage roads. This shed measures 60 by 30 feet at the Volgograd facility which is used as an illustration in this report. However, these dimensions are not as constant as those of the other buildings in the facility.

A small revetment, enclosing two or more cylindrical objects, has also been observed at the Type I facilities. This area is generally located near the main entrance and may be conventional POL storage.

At all SA-2 SAM support facilities, both Type I and Type II, there are buildings located outside of the fence line which are associated with the installation. Because of variation in the number and size of these buildings, an estimate has not been made as to the number of personnel employed at the facilities. In many cases facilities are located near existing military garrisons which could be used for housing and logistical support.

TYPE II SUPPORT FACILITIES

Type II facilities have been covered only by KEYHOLE photography; therefore, the interpretation is somewhat limited. The most obvious differences between the Type I and Type

II facilities are the internal road network and the perimeter fence line which are square rather than rectangular (Figures 4 and 5). There does, however, appear to be a correlation be-

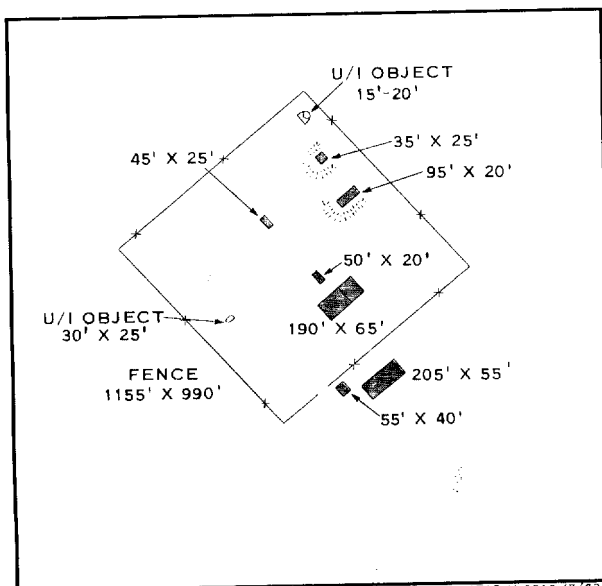


FIGURE 4. ORSK SAM SUPPORT FACILITY (TYPE II).

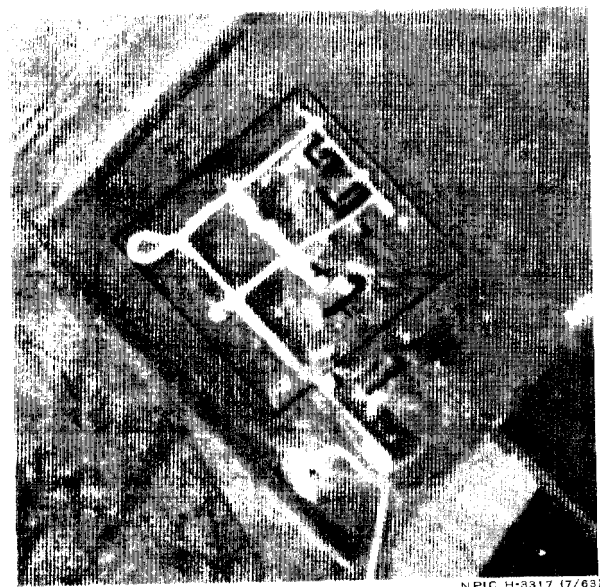


FIGURE 5. ORSK SAM SUPPORT FACILITY

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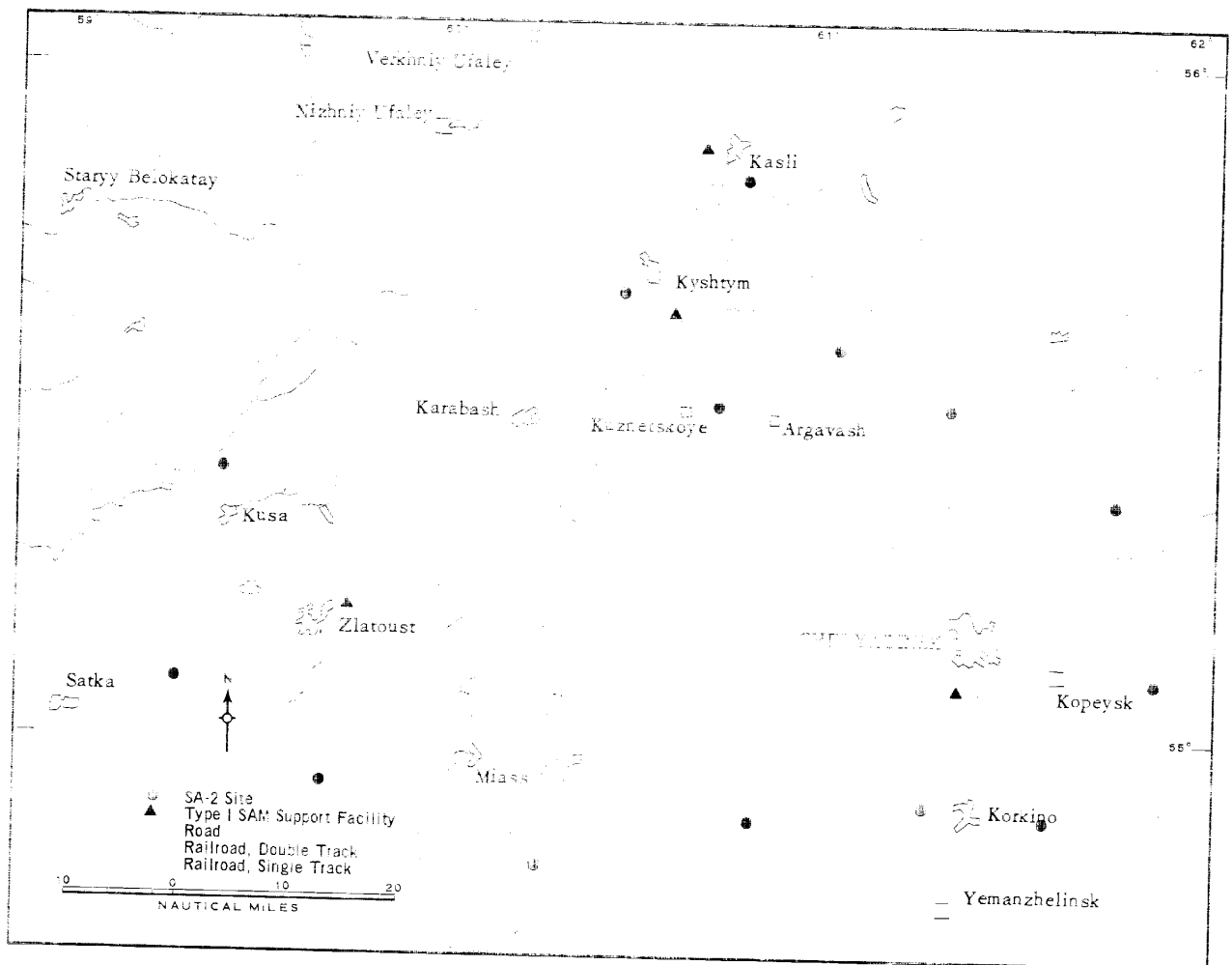


FIGURE 6. DEPLOYMENT OF SAM SUPPORT FACILITIES, CHELYABINSK AREA.

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tween many of the structures observed at both types.

The most prominent feature of the Type II facilities is a straight road on which are located the receiving/maintenance building and the probable assembly building. The receiving/maintenance building (190 by 65 feet) is again the largest structure within the facilities, and dimensionally it is similar to its counterpart in the Type I. At some of the square support facilities, however, this building is not used as a drive-through building.

The probable assembly building is located at the opposite end of the main road within the facility; and although it is smaller (45 by 25 feet) than the assembly building of the Type I facility, its relationship to the receiving/maintenance is the same.

The small drive-through checkout building (50 by 25 feet) located near the receiving/maintenance building in the Type I facility has been identified at some of the Type II facilities but is absent at others.

In addition, the open shed located at the midpoint of the service road of the Type I facility has not been seen in a corresponding position within the Type II.

There is no apparent conformity in the arrangement of the other internal roads in relation to the main road. The component

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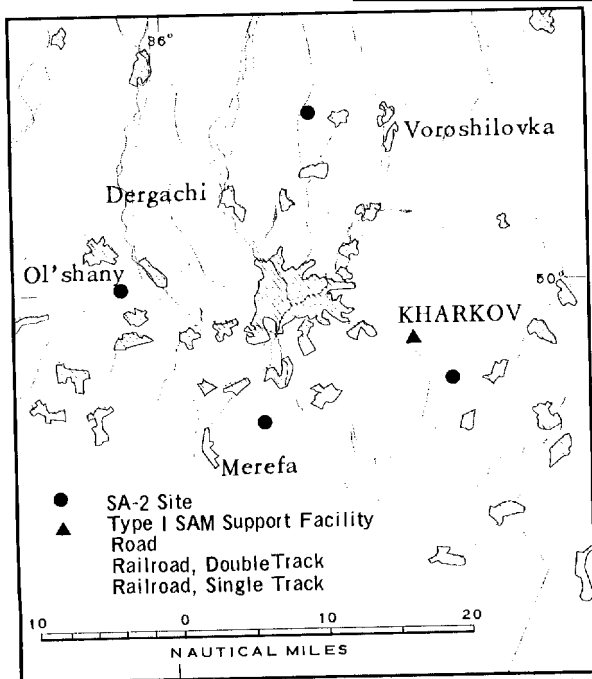


FIGURE 7. DEPLOYMENT OF SAM SUPPORT FACILITIES, KHARKOV AREA.

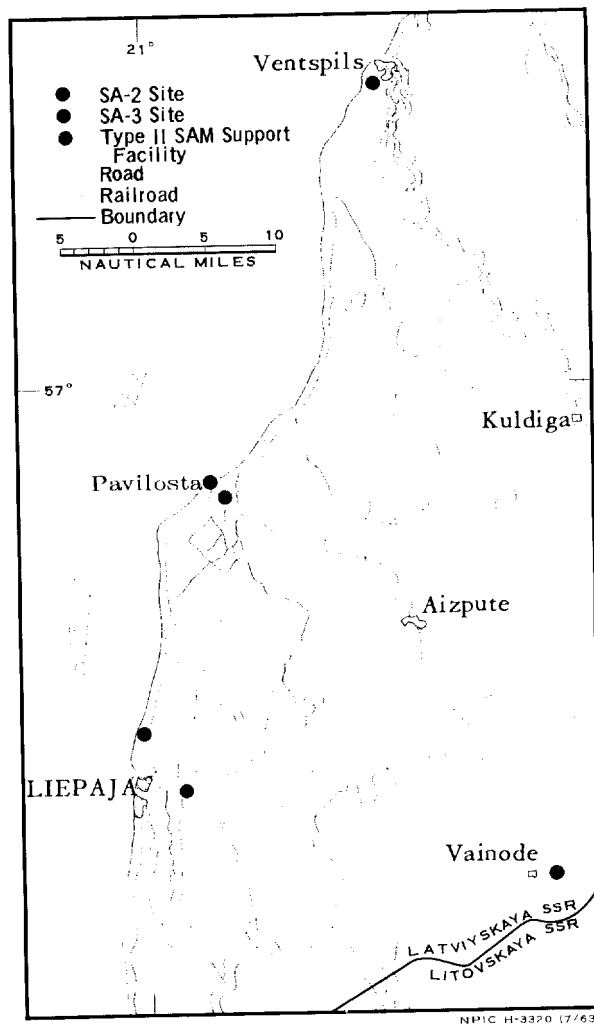


FIGURE 8. DEPLOYMENT OF SAM SUPPORT FACILITIES, LIEPAJA AREA.

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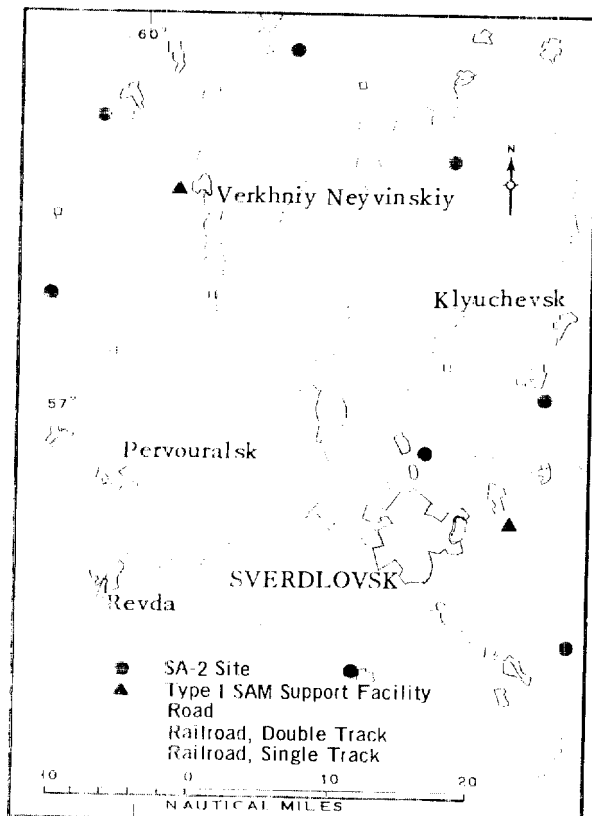


FIGURE 5. DEPLOYMENT OF SAM SUPPORT FACILITIES, SVERDLOVSK AREA.

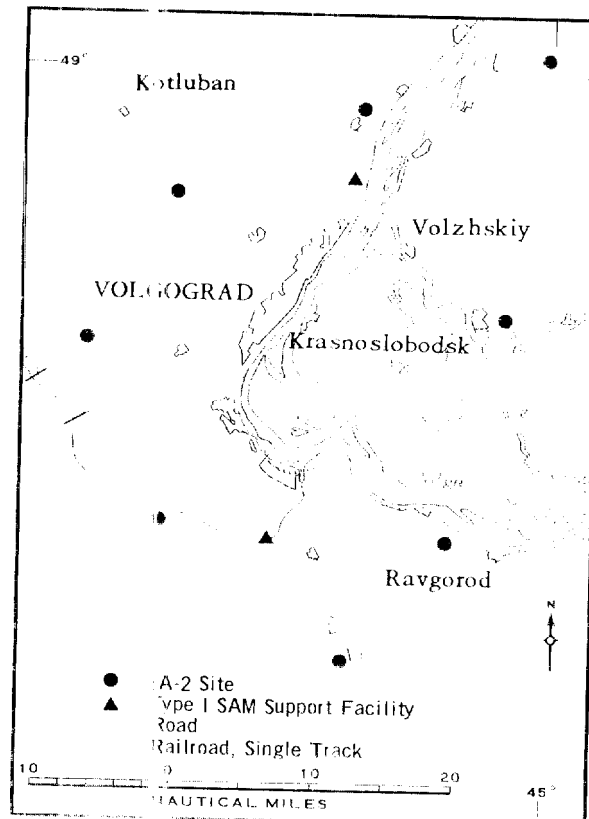


FIGURE 10. DEPLOYMENT OF SAM SUPPORT FACILITIES, VOLGOGRAD AREA.

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CONCLUSIONS

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Table 1. SA-2 SAM Support Facilities in USSR and European Satellites

Place Name		Coordinates		BE Number
Country	Type I (rectangular)			
USSR				
	Angarsk SAM Support Facility	52-32N	104-04E	
	Baku SAM Support Facility	40-24N	50-01E	
	Bratsk Dam SAM Support Facility	56-17N	101-40E	
	Brest SAM Support Facility	52-07N	23-37E	
	Chelyabinsk SAM Support Facility	55-04N	61-22E	
	Cherepovets SAM Support Facility	59-07N	38-02E	
	Dnepropetrovsk SAM Support Facility	48-23N	34-58E	
	Dodonovo SAM Support Facility	56-09N	93-21E	
	Dolon Airfield SAM Support Facility	50-37N	79-13E	
	Donetsk SAM Support Facility	47-53N	37-47E	
	Glazov SAM Support Facility	58-06N	52-40E	
	Gomel SAM Support Facility	52-25N	30-55E	
	Gorkiy SAM Support Facility	56-19N	43-44E	
	Irkutsk SAM Support Facility	52-21N	103-59E	
	Izhevsk SAM Support Facility	56-48N	53-23E	
	Kaliningrad SAM Support Facility 1	54-44N	20-04E	
	Kaliningrad SAM Support Facility 2	54-38N	21-05E	
	Kasli SAM Support Facility	55-53N	60-41E	
	Kasli SAM Support Facility (Kyshtym)	55-38N	60-36E	
	Kazan SAM Support Facility	55-48N	49-13E	
	Khabarovsk SAM Support Facility	48-22N	135-09E	
	Kharkov SAM Support Facility	49-56N	36-27E	
	Komsomolsk SAM Support Facility	50-33N	136-53E	
	Kremenchug Dam SAM Support Facility	48-59N	33-12E	
	Kuybyshev SAM Support Facility 1	53-17N	50-17E	
	Kuybyshev SAM Support Facility 2	53-30N	49-31E	
	Lvov SAM Support Facility	49-47N	24-05E	
	Magnitogorsk SAM Support Facility	53-21N	59-04E	
	Malaya Sazanka Nuclear Stockpile			
	SAM Support Facility	51-15N	128-03E	
	Mingechaur SAM Support Facility	40-45N	47-00E	
	Minsk SAM Support Facility	53-54N	27-40E	
	Moscow (Probable) SAM Support Facility (Odintsovo)	55-42N	37-18E	
	Murmansk SAM Support Facility 1	69-02N	33-14E	
	Nikolayev SAM Support Facility	46-59N	32-09E	
	Nizhniy Tagil SAM Support Facility	57-52N	60-02E	

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Table 1. (Continued)

Country	Place Name	Coordinates	BE Number
USSR	Nizhnyaya Tura SAM Support Facility	58-10N 59-38E	
	Novosibirsk SAM Support Facility	55-06N 82-50E	
	Odessa SAM Support Facility	46-32N 30-39E	
	Odesk SAM Support Facility	54-59N 73-32E	
	Ostrov Gorokovka Airfield SAM Support Facility	57-19N 28-23E	
	Perm SAM Support Facility	58-00N 56-18E	
	Petropavlovsk-Kamchatskiy SAM Support Facility	53-11N 158-46E	
	Plesetsk ICBM Complex SAM Support Facility	62-09N 40-10E	
	Port SAM Support Facility	49-00N 41-46E	
	Riga SAM Support Facility	56-01N 23-56E	
	Rostov SAM Support Facility	47-07N 39-10E	
	Saratov SAM Support Facility	51-00N 46-10E	
	Simuya SAM Support Facility	54-05N 43-15E	
	Sevastopol SAM Support Facility	44-11N 33-22E	
	Severodvinsk SAM Support Facility	64-00N 39-49E	
	Sheherbakov SAM Support Facility	58-00N 38-43E	
	Sovetsk SAM Support Facility	55-05N 21-55E	
	Sverdlovsk SAM Support Facility	56-00N 60-49E	
	Tallinn SAM Support Facility	59-00N 24-47E	
	Tarbov Regional Military Storage Installation SAM Support Facility	52-00N 41-27E	
	Tyura Tam SAM Support Facility	45-00N 63-25E	
	Ukraine Airfield SAM Support Facility	51-00N 128-20E	
	Verkhne Neyvinskiy SAM Support Facility	57-06N 60-04E	
	Vladivostok SAM Support Facility 1	43-01N 132-26E	
	Vologograd SAM Support Facility 1	48-00N 44-38E	
	Vologograd SAM Support Facility 2	48-06N 44-30E	
	Voroslavl SAM Support Facility	57-00N 39-50E	
	Vurya ICBM Launch Complex SAM Support Facility	59-00N 49-25E	
	Vuryuzan SAM Support Facility	54-00N 58-27E	
	Zhukovsk SAM Support Facility	55-00N 59-44E	
Albania	Tirane SAM Support Facility	41-15N 19-42E	
Czechoslovakia	Bratislava SAM Support Facility	48-10N 17-19E	
	Ostrava SAM Support Facility	49-59N 18-20E	
	Prague SAM Support Facility	50-00N 14-03E	
Hungary	Budapest SAM Support Facility	47-30N 19-20E	
	Miskolc SAM Support Facility	48-00N 20-45E	
Poland	Chorzow SAM Support Facility	50-20N 18-33E	
	Warsaw SAM Support Facility	52-00N 20-39E	
Rumania	Bucharest SAM Support Facility	44-21N 26-13E	

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Table 1. (Continued)

Country	Place Name	Coordinates	BE Number
USSR	Type II (square)		
	Anadyr SAM Support Facility	64-48N 177-45E	
	Arkhangelsk SAM Support Facility	64-31N 40-43E	
	Astrakhan SAM Support Facility	46-26N 47-56E	
	Balakovo SAM Support Facility	52-00N 47-48E	
	Balta Regional Military Storage Installation SAM Support Facility	47-44N 29-57E	
	Barano-Orenburgskoye MRBM Complex SAM Support Facility	44-27N 131-22E	
	Berezniki SAM Support Facility	59-23N 56-52E	
	Borshehev MRBM Complex SAM Support Facility	48-46N 26-02E	
	Bryansk SAM Support Facility	53-21N 34-17E	
	Chita SAM Support Facility (Probable)	52-04N 113-30E	
	Kalinkovichi SAM Support Facility	52-11N 28-55E	
	Kamyslin SAM Support Facility	50-03N 45-21E	
	Khada Bulak SAM Support Facility	50-43N 116-07E	
	Kishinev SAM Support Facility	46-57N 28-52E	
	Kiyev SAM Support Facility	50-19N 30-24E	
	Kizyl-Arvat SAM Support Facility	38-57N 56-18E	
	Kovel SAM Support Facility	51-10N 24-38E	
	Krasnoyarsk SAM Support Facility	56-10N 92-58E	
	Liepaja SAM Support Facility	56-31N 21-06E	
	Lutsk MRBM Complex SAM Support Facility	50-45N 25-09E	
	Lugansk Possible SAM Support Facility	48-32N 39-10E	
	Magadan SAM Support Facility	59-36N 150-48E	
	Makhachkala SAM Support Facility	42-56N 47-33E	
	Mukachevo SAM Support Facility	48-21N 22-42E	
	Murmansk SAM Support Facility 2	68-50N 33-08E	
	Nakhodka SAM Support Facility	42-54N 133-05E	
	Nebit Dag SAM Support Facility	39-28N 54-19E	
	Nikolayevsk-Na-Amure SAM Support Facility	53-07N 140-52E	
	Novaya Mezinovka Regional Military Storage SAM Support Facility	53-31N 26-56E	
	Novorossiysk SAM Support Facility	44-40N 37-46E	
	Olenya SAM Support Facility	68-13N 33-49E	
	Orsha SAM Support Facility	54-29N 30-25E	
	Orsk SAM Support Facility	51-24N 58-02E	
	Pechenga SAM Support Facility	69-45N 32-06E	
	Penza SAM Support Facility	53-12N 44-56E	
	Petrozavodsk SAM Support Facility	61-48N 34-04E	
	Sary Shagan AMM Complex SAM Support Facility	46-03N 73-28E	
	Shuchuchin Airfield SAM Support Facility	53-35N 24-59E	
	Sovetskaya Gavan SAM Support Facility	48-58N 140-12E	
	Spassk Dalniy SAM Support Facility	44-12N 133-10E	
	Stanislav SAM Support Facility	48-35N 24-36E	
	Sterlitimak SAM Support Facility	53-39N 55-49E	
	Stryy SAM Support Facility	49-14N 23-53E	
	Tashkent SAM Support Facility	41-20N 69-24E	
	Uman MRBM Complex SAM Support Facility	48-43N 30-17E	
	Ussuriysk SAM Support Facility	43-51N 132-02E	
	Vladivostok SAM Support Facility	43-01N 131-47E	
	Voronezh SAM Support Facility	51-33N 39-08E	
	Yevpatoriya SAM Support Facility	45-12N 33-23E	
	Yuzhno-Sakhalinsk SAM Support Facility	46-52N 142-46E	
	Zaporozhye SAM Support Facility	47-44N 35-15E	

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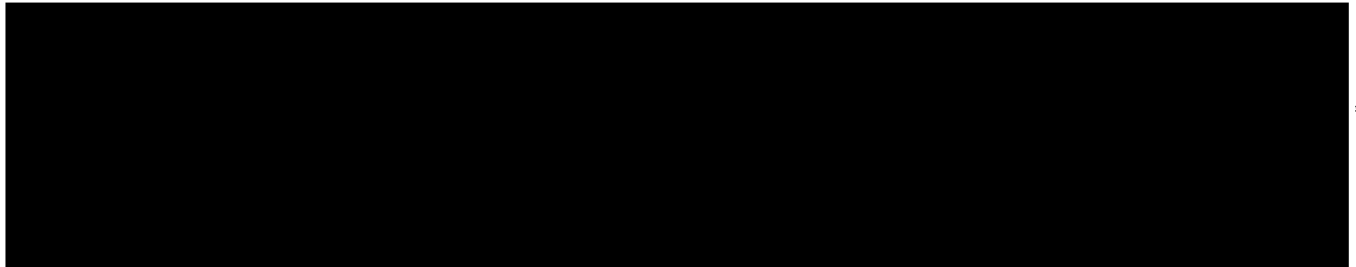
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